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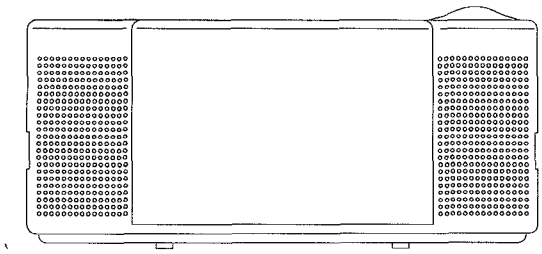
aiwa

aiwa SERVICE

FR-A505

SERVICE MANUAL



CLOCK RADIO

• TYPE: U

REVISION PUBLISHING

This Service Manual is the "Revision Publishing" and replaces "Simple Manual" (S/M Code No.09-983-259-7T1).

S/M Code No. 09-983-259-7R1

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SPECIFICATIONS

Power source	AC 120 V, 60 Hz
Output	280 mW (EIAJ)/Max: 400 mW
Power consumption	4 W
Speaker	50 mm, 16 Ω (2)
Frequency range	FM: 87.5 – 108 MHz AM: 530 – 1,710 kHz
Antennas	FM wire antenna Ferrite bar antenna for AM
Dimensions (W × H × D)	240 × 108 × 90 mm (9 1/2 × 4 3/8 × 3 5/8 in.)
Weight	810 g (1.78 lbs.)

- Design and specifications are subject to change without notice.

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	S2-085-620-000		IC,LM-8562
	S3-108-301-010		IC,TDA-1083/2B/3C/3A
TRANSISTOR			
	89-110-155-010		TR,2SA1015-GR
	89-211-821-080		TR,2SB1182(Q)/TLR
	89-318-154-080		TR,2SC1815GR
	86-NFZ-657-080		TR,2SC1923(O)
DIODE			
	82-596-799-010		DI,1N4001B
	82-135-799-010		DIODE,IN4148
	87-017-080-080		ZENER,3.9V 1/2W
	S9-7U0-6R2-1B0		ZENER,6.2V
MAIN C.B			
C116	87-010-380-010		CAP,E 47-16V
C119	87-010-101-080		CAP,E 220-16V
C125	87-010-380-010		CAP,E 47-16V
C127	87-010-101-080		CAP,E 220-16V
C129	87-010-101-080		CAP,E 220-16V
C134	87-010-380-010		CAP,E 47-16V
C202	87-010-101-080		CAP,E 220-16V
C203	87-010-037-010		CAP,E 10-50V
C213	87-010-053-810		CAP,E 1-50V
C214	87-010-249-010		CAP,E 470-16V
C215	87-010-380-010		CAP,E 47-16V
C401	87-010-038-010		CAP,E 22-25V
J101	S0-800-960-0A0		JACK,HP 3.5MM MON
L105	S1-122-531-000		COIL,MW 0.07/3-100-4
L107	87-005-683-080		INDUCTOR 15UH
L108	S0-118-160-000		COIL,INDUCTANCE CB-250-5-0.35
LED201	S0-140-550-000		LED DISPLAY
S101	S2-200-211-000		SW,SLIDE 2P2T
S201	SK-HH9-130-000		SW,PB(CSDSR510,515)
S202	SK-HH9-130-000		SW,PB(CSDSR510,515)
S203	SK-HH9-130-000		SW,PB(CSDSR510,515)
S205	SK-HH9-130-000		SW,PB(CSDSR510,515)
S206	SK-HH9-130-000		SW,PB(CSDSR510,515)
S207	S4-300-611-020		SW,SLIDE 4P3T
S208	S2-400-211-000		SW,SLIDE 2P4T
S401	S2-300-211-030		SW,SLIDE 2P3T
T101	S1-001-300-100		IFT,F-810013 10MM
T102	S1-001-400-100		IFT,F-810014 10MM
T103	S1-001-700-100		IFT,A-810017 10MM
T104	S0-446-800-100		IFT,A4468 10MM
T105	S1-001-500-100		IFT,F-810015 10MM
T106	S0-968-300-100		IFT,OA-709683 10MM
VC101	S3-222-000-000		PVC,AM/FM
VR101	SE-095-031-040		RES,VARIABLE 15A50K
LED C.B			
D407	87-070-288-010		LED GL380
Q406	87-A30-031-010		PHOTO TRANSISTOR PT380F
SW C.B			
S204	SK-HH9-130-000		SW,PB(CSDSR510,515)

- コネクタについては、初回発注の扱いとはせず、受注後に業者へ発注し、供給致します。
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

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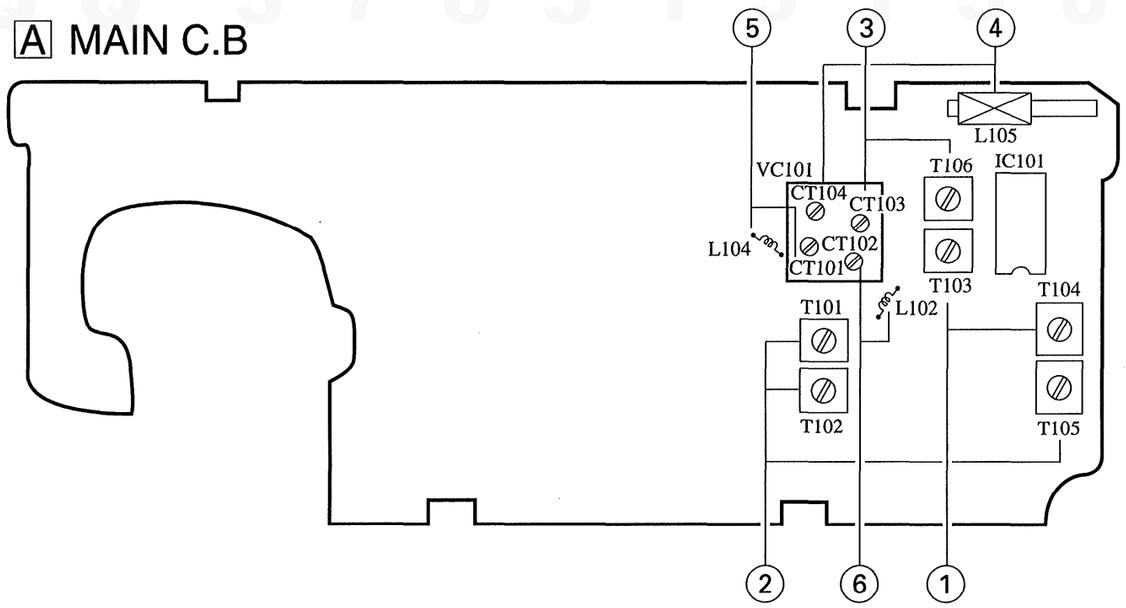

1. AM IF Adjustment
   - Test point: TP4, 6
     T2, 4 ..... 455kHz

2. FM IF Adjustment
   - Test point: TP3, 4, 6
     T1, 3, 6 ..... 10.7MHz

3. AM FREQ. RANGE Adjustment
   L7 ..... 517kHz
   TC3 ..... 1750kHz

4. AM TRACKING Adjustment
   L1 ..... 600kHz
   TC4 ..... 1400kHz

5. FM FREQ. RANGE Adjustment
   - Test point: TP1, 2
     L4 ..... 86MHz
     TC1 ..... 109MHz

6. FM TRACKING Adjustment
   - Test point: TP1, 2
     L2 ..... 90MHz
     TC2 ..... 108MHz

TUNER SECTION
TEST CONDITION: SET AM/FM ON ONE FREQUENCY
IC101(TDA1083)

PIN'S NUMBER	1	2	3	4	5	6	7	8
FM	1.64	1.62	0	5.26	5.26	0	0	1.84
AM	1.25	1.23	0	5.28	5.28	1.14	1.25	1.52
PIN'S NUMBER	9	10	11	12	13	14	15	16
FM	0	1.23	0	2.34	5.27	5.27	5.27	2.14
AM	0	1.24	0	2.35	5.28	5.28	5.28	1.55

	Q101(1923)			Q102(1923)		
	E	C	B	E	C	B
FM	0.78	4.04	1.52	0.62	4.52	1.21

CLOCK SECTION
IC201(LM8562)

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Switch Function	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Radio On	10.03	10.12	1.53	9.55	-1.76	-1.76	3.79	1.90	4.39	4.38	3.31	-1.78	4.35	-1.79
Sleep	11.56	11.12	2.51	-0.75	-0.64	-0.77	4.89	4.10	5.52	5.56	4.45	-0.68	5.39	-0.70
Alarm	9.89	7.82	4.14	8.85	5.35	-1.73	-1.74	2.12	4.27	4.28	3.36	-1.81	4.31	-1.73

	Q201(1815)		
Switch Function	E	C	B
Radio On	5.27	6.41	6.03
Sleep	0.51	11.12	0
Alarm	5.15	9.82	5.76

	Q401(1182)			Q402(1182)			Q403(1815)		
Dimmer sw.	E	C	B	E	C	B	E	C	B
high	4.43	4.10	4.40	4.70	4.33	4.70	-1.90	5.46	-1.87
low	5.41	5.05	5.41	5.48	5.08	5.52	-1.27	6.74	-1.27
off	8.25	7.97	4.34	8.25	7.95	4.42	2.84	2.94	3.54

	Q404(1815)			Q405(1015)		
Dimmer sw.	E	C	B	E	C	B
high	-1.98	-1.50	-2.09	9.25	-1.54	9.25
low	-1.25	-0.77	-1.26	10.40	-0.99	10.36
off	6.48	10.59	7.18	10.69	10.65	9.85

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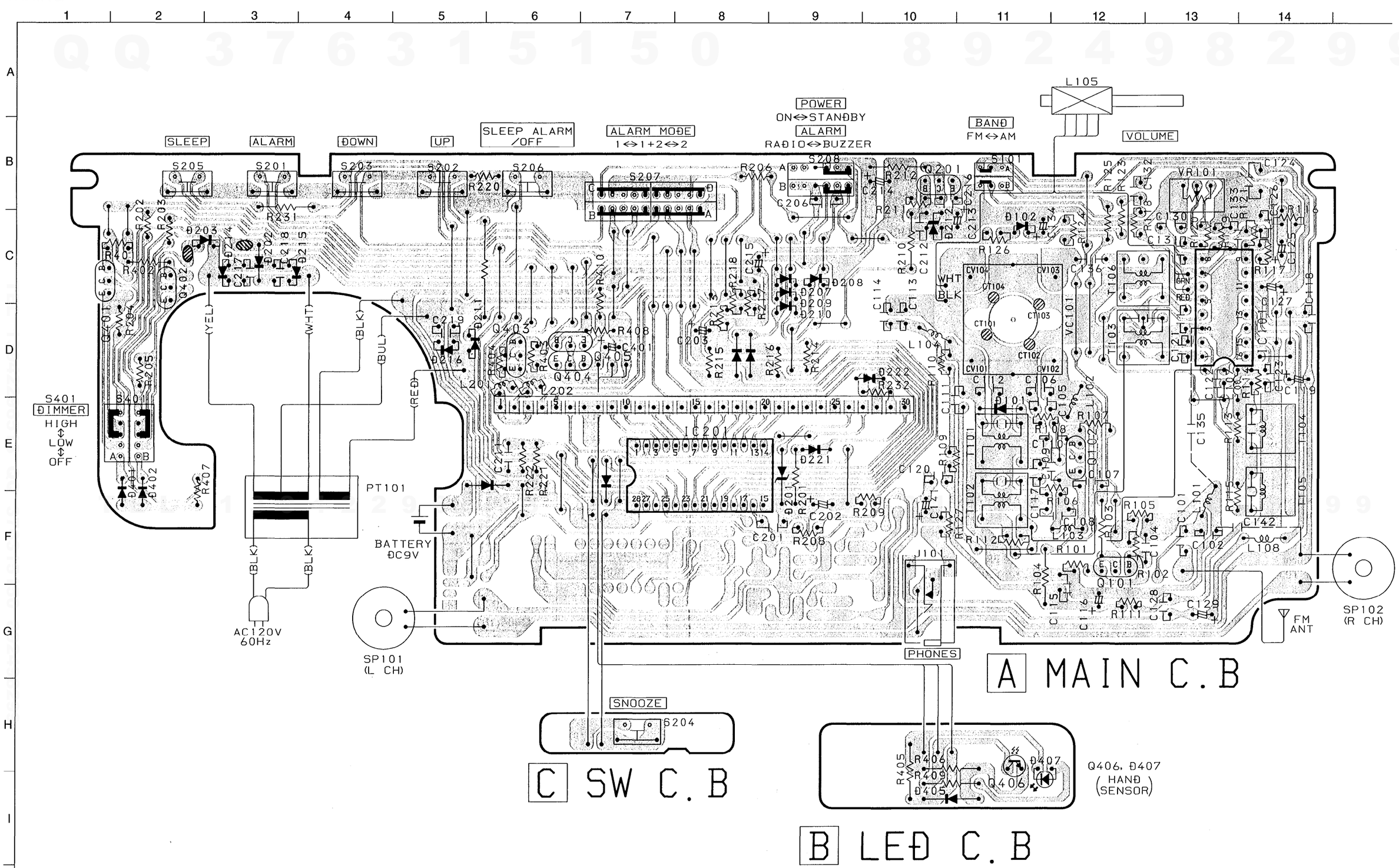
WIRING



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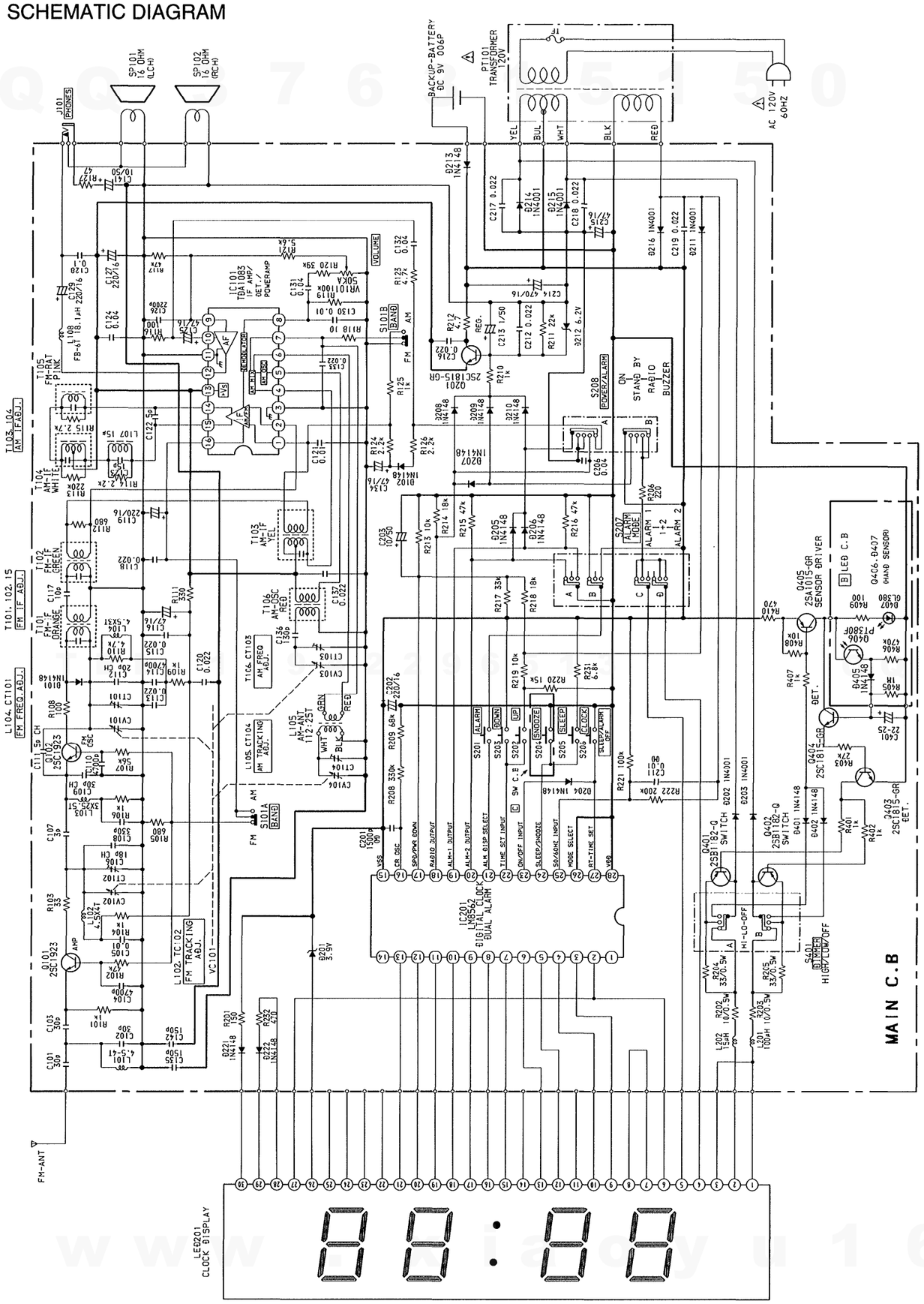
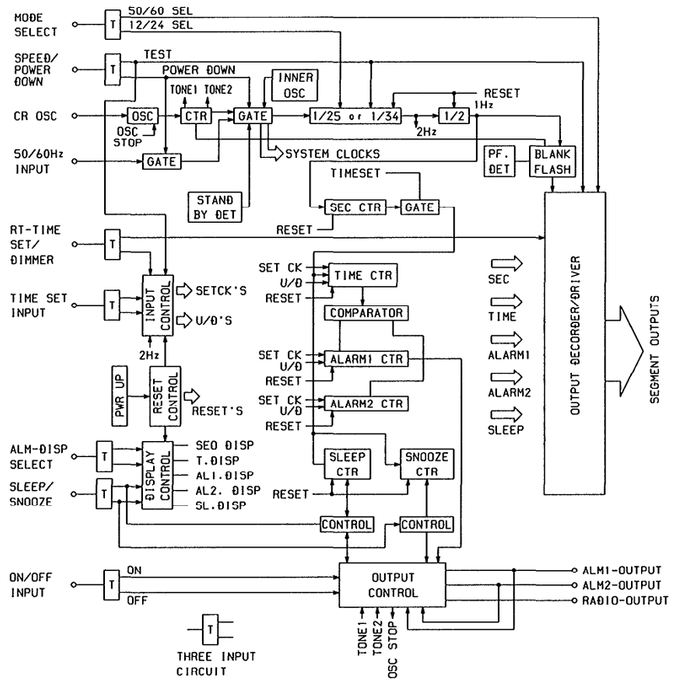
SCHEMATIC DIAGRAM

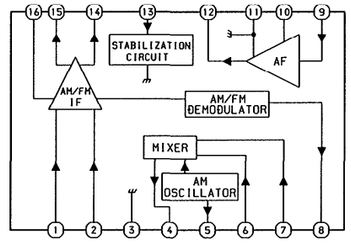


IC BLOCK DIAGRAM

IC, LM8562



IC, TDA1083



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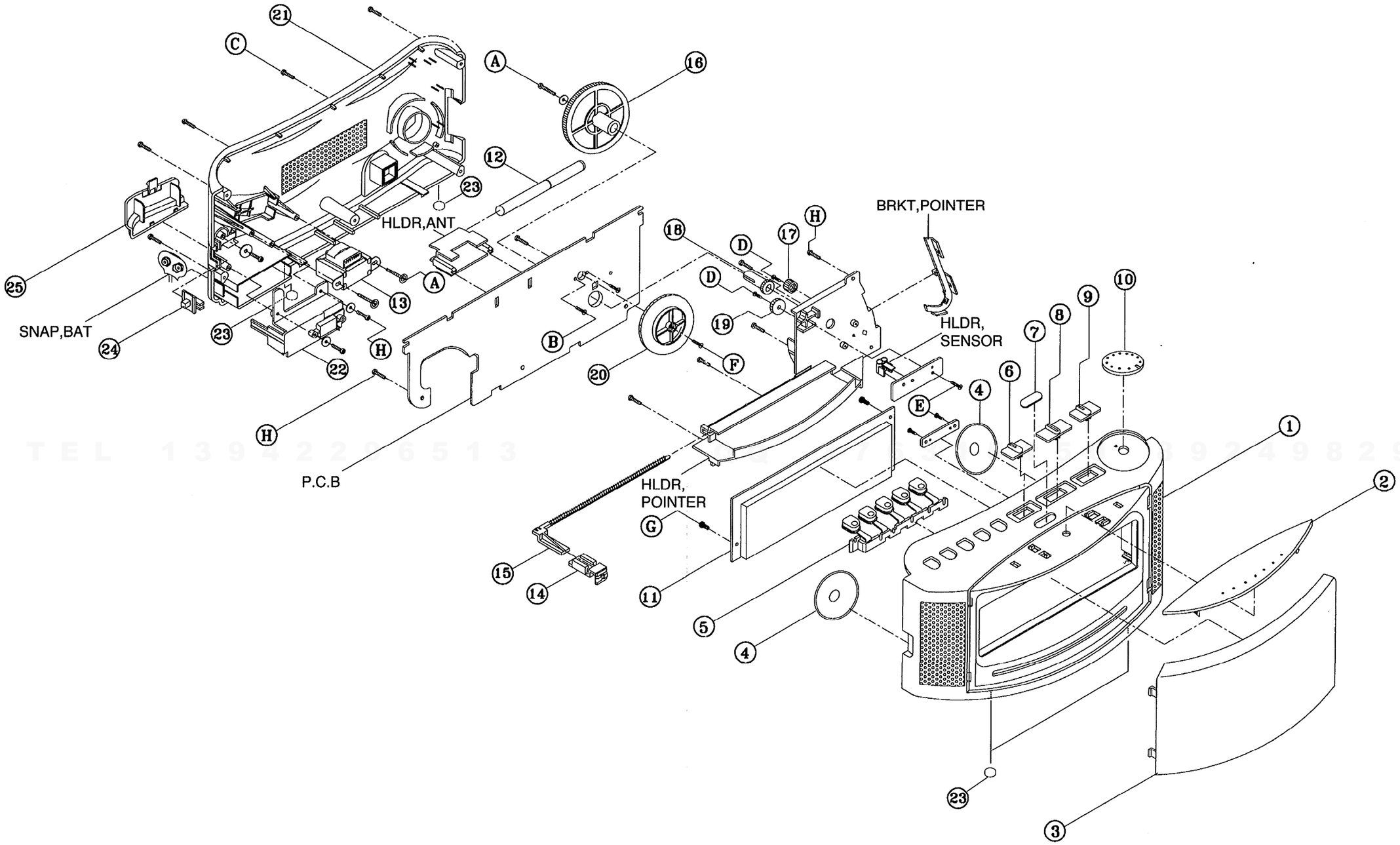
MECHANICAL EXPLODED VIEW 1/1



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MECHANICAL PARTS LIST 1/1

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If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S8-RU7-010-100		CAB,FRONT
2	S8-RU7-060-100		BTN,SNOOZE
3	S8-RU7-040-100		WINDOW,DIAL
4	S2-099-003-000		SPKR,2 16 OHM 0.3W-0.5W
5	S8-RU7-070-010		BTN,CLOCK
6	S8-RU7-080-000		KNOB,ALARM
7	S8-RU7-230-000		SENSOR WINDOW
8	S8-RU7-090-000		KNOB,POWER
9	S8-RU7-210-000		KNOB,SLIDE BAND
10	S8-RU7-050-010		KNOB,VOLUME
11	S0-140-550-000		LED DISPLAY
12	S0-100-900-000		FERRI,BAR 10-90
⚠ 13	S1-115-010-200		PT,TF EI-35/15 120V:9Vx2/10.5V
14	S8-RU7-120-000		POINTER,DIAL
15	S8-RU7-140-000		GEAR,POINTER
16	S8-RU7-110-000		KNOB,TUNING
17	S8-RU7-190-000		GEAR,JOINT TUNING
18	S8-RU7-180-000		GEAR,TUNING
19	S8-RU7-200-000		GEAR,POINTER TUNING
20	S8-RU7-170-000		GEAR,POLYVARI
21	S8-RU7-020-100		CAB,REAR
22	S8-RU7-250-000		COVER,BAT
23	S0-108-290-000		FOOT,RUBBER
24	S8-RU7-100-000		KNOB,DEMER
25	S8-RU7-030-000		DOOR,BAT
A	87-651-101-410		SCREW,ST3.0-18
B	87-322-071-010		SCREW,2.6-4MM KM
C	87-653-096-410		SCREW,ST3.0-10
D	87-741-035-410		SCREW,ST2.0-6
E	87-841-035-410		SCREW,ST2.0-6
F	87-251-072-410		SCREW,M2.6-5
G	87-741-094-410		SCREW,3-6
H	87-741-095-410		SCREW,ST3.0-8

ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S8-RU7-910-110		INSTRUCTION BOOK(EX-ESF)
⚠ 2	S1-171-201-000		CORD,POWER 6.5

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REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G— —	
G— —	
G— —	

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